Freeman's 'Bird Calendar for the Fargo Region'[3]—As an aid to local bird students Mr. Freeman has presented in the April, 1919, issue of the 'Fargo College Bulletin' a list of the birds of the vicinity of Fargo, N. Dakota, with the dates of arrival or of occurrence taken mainly from his personal records. While the author makes no claim for completeness and solicits additional data, the fact that he has been able to include 181 species, hows that his little list forms an important contribution to the published literature of the birds of North Dakota. The species are arranged in systematic order with annotations. Let us hope that this excellent start may be the forerunner of a more extensive report later on, when the co-operation for which the author asks will undoubtedly add a number of species and further data of interest.—W. S.

Grinnell on the English Sparrow in Death Valley.[1]—Dr. Grinnell on a recent trip to Death Valley was surprised to find a colony of English Sparrows established at the Greenland Ranch, 178 feet below sea level. He points out the fact that so far, during a period of about fifty years, no differentiation from the original English stock has been detected in the birds reared in this country. The fact remains, however, that the conditions under which the birds live have perhaps not differed materially from those prevalent in England. Now, however, we have a colony of them established in a spot characterized by probably the highest temperature and lowest relative humidity of any place in North America, and the presence of the birds at this point constitutes, as Dr. Grinnell says, an experiment actually under way which should show how permanent are the subspecific characters which separate this bird from the related European forms. The negative evidence obtained from a study of the bird in other parts of the United States which upholds the permanency of these characters seems to Dr. Grinnell to suggest that they are really germinal rather than somatic.

In his apparent haste to be up-to-date, Dr. Grinnell has adopted Kleinschmidt's separation of the English race from that of the continent, although neither Witherby nor Stresemann has been able, with abundant material, to satisfactorily distinguish them. This latter fact seems to emphasize the remarkable permanency of the characters of this bird. Does it not seem that some forms are very much more plastic and sensitive to environmental conditions than others and that *Passer domesticus domesticus* is one of the most difficult to change? Dr. Grinnell's problem is an interesting one and in the same connection would it not be in order to repeat Mr. Beebe's experiment on the effect of humid atmospheric con-

[3] A Bird Calendar of the Fargo Region. By Daniel Freeman. Fargo College Bulletin, XV, No. 1, April, 1919, pp. 9–16.

[1] The English Sparrow has Arrived in Death Valley: An Experiment in Nature. By Joseph Grinnell. American Naturalist, Vol. LIII, Sept.–Oct., 1919, pp. 468–473.

dition on the coloration of the Ground Dove? That single experiment is quoted more than perhaps any other in exploiting the evanescent character of subspecific differences and so far as we know it has never been checked nor has very serious consideration been given to food or a variety of other factors that may have entered into it.—W. S.

Rowan and Others on the Nest and Eggs of the Common Tern.[1] The egg collector who applies for a collecting permit on the ground that he is engaged in "scientific research" would do well to consult this paper in order to appreciate the opportunity for real scientific research that is offered in the study of birds eggs. Only expert mathematicians will be able to follow intelligently the computations and calculations which are presented but the results and hypotheses are of interest to all. Briefly stated the work here reported consisted in the measurement of some 800 clutches of Tern's eggs with notes on the character of the markings and shade of color of the eggs and the nature and location of the nests in which they were deposited. With these data it was possible to prepare tables and to determine the probable correlation between certain measurements and colors, or between measurements and colors and character of nests, as well as the cause or meaning of differently colored eggs in the same nest. The work was accomplished by three field workers, one reporter and three tabulators and computers, and was in reality a continuation of a similar study carried on in the previous year. The final results show that the eggs averaged larger in 1914 than in 1913 and exhibited more uniformity, both due apparently to the bad season of 1913, when the very young and very old birds may have perished, and to the exceptionally favorable year of 1914, when food was unusually abundant.

In regard to shape of egg and character of nest it was found that the more nearly spherical eggs were in the most careless, and loosely constructed nests, while the denser brown and lighter green eggs were more often in nests without much material, i. e., mere hollows in the ground.

The resemblance of the color pattern to the nest brings in all sorts of complications. With eggs as variable as those of the terns it is inconceivable that the bird has, when building her nest, any conception of what her eggs are going to be like. As the authors say such an instinct would be conceivable in the case of a species laying uniform eggs and building a specific type of nest, but not in the present case. The fact that the terns were frequently found to begin laying before they gathered any nest materials would raise the possibility of their adapting the materials to the character of the eggs. Then comes the possibility of there being two

[1] On the Nest and Eggs of the Common Tern (*S. fluviatilis*). A Comparative Study. W. Rowan, E. Wolf, and the late P. L. Sulman, Field Workers; Karl Pearson, Reporter; E. Isaacs, E. M. Elderton, and M. Tildesley, Tabulators and Computers. Biometrika, Vol. XII, Nos. 3 and 4, November 26, 1919, pp. 308–354, plates II–VI.